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Temporal Markets

Money, the Future and Political Action

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Abstract:

Following Keynes and Shackle, money can be defined by its temporal nature, as a tool for managing and using the uncertainty of the future – as a problem and as an opportunity. Finance, which relies on money, can be described as a large apparatus that relates to the future while operating in the present, or the present intervention in the construction and structuring of the future. The financial crisis, in this context, can be brought into connection with an inadequate management of the future in terms of risks and its actual conceptualisation. The reference to time also allows one to interpret the approach and the effectiveness of public policies on finance This paper examines the measures of Quantitative Easing, describing it as "injection" of time into markets, in the hope of encouraging the use and construction of the future.

Keywords: financial time, quantitative easing, risk, future, credit, performativity, structured finance

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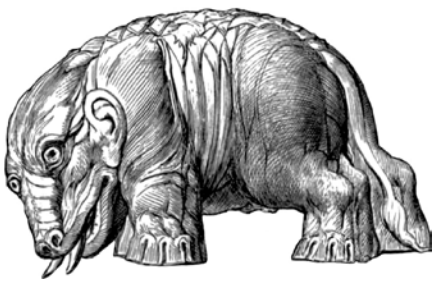

The time of money

The title of this issue purposely presents an interesting ambiguity. It refers to the future of money in two ways, money's prospects and prospective moneys. On the one hand it wants to deal with the future of money, what will happen to money in the coming years, and on the other hand it takes the money (or moneys) of the future into consideration. However, there is another possible interpretation of the future of money, which I intend to discuss. Let us call it the perspective of money itself: how money relates to the future, deals with the future and influences it. Money has its own particular way of projecting the future and referring to it. The very fact that money exists and it is used, moreover, affects the relationship between a society and its future and thereby indirectly what becomes real in the future. The circulation of money affects what our monetised society will face in times to come.

These aspects are interconnected and I will try to deal with all of them by starting with a basic topic: the relationship between money and time, or the temporality of money. **[1]** A premise of my analysis is that money is not a neutral, unsubstantial 'veil' laid on top of concrete goods (the classic understanding already criticized by Keynes and many others **[2]**). Money itself is real and influential. Money is not a result of the market; the market and its power are rather consequences of the monetisation of the economy. **[3]**

Uncertainty as an opportunity

I will deal with the role and the importance of time for money, as a constraint and as an opportunity. Without taking the dimension of time into account one cannot explain the meaning and functioning of money, which has been the basis of our monetised economy for a few centuries, nor can one explain the relevance and the spread of finance. Marx already recognized that money has a crucial temporal component **[4]** and is primarily based on the use and exploitation of temporal advantages. It was Keynes however, and after him Shackle and several others, who showed that the reference to time is the very basis of the function and usefulness of money. As economists state over and over again, money allows one to evaluate goods and to exchange them, but it can only do so because it implies a reference to time. Money puts the individual goods into relation with future goods and needs, and allows them to be managed.

Money is abstract, which means that it is independent from the characteristics of each specific good. **[5]** Price is a number and does not indicate if you are buying a book or a weapon, a sandwich or whatever. A sum of money does not refer to any specific good because it generally refers to all possible goods and relates them with one another. One can use it to buy a given commodity, but for everything that one buys one does not buy something else. Each purchase is compared with all other alternative purchases, with all other things one could buy in its place.

Why is this an advantage, and how does it work? As long as we only refer to the present moment, the advantage of money is limited, and in fact barter

[1] Some passages of this text refer to my article 'The time of money in finance and U.S. society', to be published in Müller; Klöckner (eds.) (2017) *Financial Times*. Durham (NC): Duke U.P. For comments, criticism, and suggestions on an earlier draft of this paper, I would like to thank Axel Paul and *Behemoth*'s anonymous reviewers.

[2] A critique of this model can already be found in Keynes 1936, 18f. (cf. also Robinson 1971, 64f; Smithin 2000). For a discussion of the illusion of neutrality of money see Ingham 2004, 15f.

[3] Cf. Ingham 2000, 17.

[4] "Economy of time, to this all economy ultimately reduces itself." (Marx 1973, 173)

[5] Simmel's notion of money as the "absolute means" expresses its ability to "extend beyond every particular use" (2004, 221) thereby providing "unlimited possibilities" (243).

may suffice. Money allows comparisons to be made because of its correlated functions of measure of value and medium of exchange, which have always been observed by economists (Ingham 2005). In every present the available goods as well as the needs to be met are limited and the goal of exchange is simply to coordinate the needs of everyone. We, however, do not only refer to the present, for as soon as we include further time references, in particular the future, in our perspective the situation becomes more complex. Everyone knows that there are other goods one might enjoy, if one would have time to acquire them, and everyone knows that in the future one will have other needs, some of which we can already imagine, while others we still do not know. It is in the view of the future that needs to become unlimited, because the future is open and unknown, and does not allow one to know in the present what we might need or when. We do not yet know what will happen in the future and what we might need, but it is still possible to be afraid of not being able to get it and worry about it.

It is at his point that money's temporal function as the "link between the present and the future" comes into play (Keynes 1936, 293), and here its abstraction becomes a critical advantage. Since a sum of money does not give any indication about the goods that you can acquire (and imposes no limit other than its size), its purchasing power can freely refer to the indeterminate mass of all possible future goods, in response to the undetermined needs that may arise. I do not know what I might need, but I know that if I have money I will be able to get it. And since the future is unknown, the possible needs are also undetermined and the amount of money ones has is potentially never enough. Moreover, money (in its liquid form) does not have an expiration date nor is it bound to a specific moment. I can spend it at any time and can use time to gather information about the world and about my needs. Money operates as a "medium of deferment and of search" (Shackle 1972, 160f., 207; 1990, 213), offering the time it takes to deal with the unknown future. One can postpone the decision on how to spend his money as long as he wants and in reference to any choice of goods. If one has money, one can wait and see – practically speaking, one has time and one can use it.

Money faces the indeterminacy of the future and allows one to manage it, offering a nonspecific guarantee against the concerns about tomorrow. Uncertainty can even become an opportunity. The existence of money enables the use of the openness of the future to one's advantage. No one knows what will happen tomorrow, but everyone knows that the others don't know either, because the future does not yet exist. The future is radically unknown because it depends on what we all do when trying to shape it, reciprocally observing each other in in doing so. This is Reinhart Koselleck's (1979) insight of an open future, which is uncontrollable and unpredictable because it depends on us, on our choices and our behaviour, in a reflexive and self-referential situation that shows all the peculiarities and uncertainties of modern society.

This unknowability, however, is also a resource: the future cannot be known because it is still not here - but this also means that it is not decided yet, it still has to be built and we can act on it. We can imagine it and design it, wait for it and be surprised (Shackle 1979). We can operate in the present

in order to build the future, affecting the course of things and even using its openness for our own purposes. This is what finance does and what credit has done for hundreds of years - at least since it was no longer condemned as a sin and abomination, precisely because of its use of time (Le Goff 1986). **[6]** Working with credit is using the future in the present. The one who borrows money commits his future by ensuring the return of a respective sum of money, but can already enjoy the wealth he (or she) expects to earn in the present. Tomorrow I will have to pay the installments of the loan, but I get the money today and if I make judicious use of it, I can obtain profits that will enable me to repay the debt and even have more money at hand than before. I constrain my future today in order to build a better future, which would not have occurred if I had not acted on it in the first place. The circularity of the open future is unfolded and reveals its virtuous side. The unpredictability of the future can be an opportunity.

The use of the future in finance

Finance relies on this, and it multiplies and emphasizes the present use of the future with loans, securities, bonds, and the increasingly non-transparent tools of structured finance, which use elaborate models to push reflexivity to hyperbolic levels. The use of the future is itself sold and bought, and then sold again in practices like securitisation. **[7]** The future is built and bound in more and more complex ways, which make more and more wealth available to operators and generate the astonishing figures circulating in the „virtual“ financial markets of our society. This generates an intensified and progressively uncontrolled relationship with the future.

The open future is not a controllable future, as crises and financial breakdowns dramatically reveal. The future is open in the sense that it cannot be determined and remains open also when we try to bind it. The recent trend of performativity studies confirms this (McKenzie 2006; Callon et al. 2007; MacKenzie et al. 2007; MacKenzie 2009; Esposito 2013). Finance is performative, in the sense that it reacts to the models and the expectations of the actors, but it is not at all certain that it complies with them. It can do so, as happened in the 1990s in the much commented case of the Black-Scholes formula (McKenzie 2006), but it can also react deviating, as happens in the cases of counter-performativity in which markets contradict the predictions of the models. These are two sides of the same coin and a confirmation of the openness of the future. What we do affects the future, but does not determine it. The future depends on present expectations and actions, but we cannot know how.

The financial crisis of 2007-08 illustrated this and also showed the naivety of the attempts to ‘neutralize’ risk in financial markets and the impossibility of politically controlling the course of finance. All attempts to intervene politically on finance (from the Paulson plan **[8]** onwards) were regularly anticipated and neutralized by moral hazard and by the exasperated reflexivity of markets.

[6] The creditor gets a profit by lending his money, without producing or providing anything else than the time that elapses until the money is returned. In practice the creditor sells time. The critique was that time belongs to God, who gave it to men for free in order to use it, not to sell it for a profit.

[7] Securitisations create financial instruments that combine different kinds of debts and sell their related cash flows to third party investors.

[8] Signed into law in October 2008 by President George W. Bush as the “Emergency Economic Stabilization Act of 2008”.

Interventions, both of a fi and political nature, certainly have effects, but hardly those that are desired, because the actors who execute them are not external agents, but are embedded in the market on which they act. Prediction and intervention, therefore, generate effects that they can neither control nor take into account. This is an inevitable consequence of the openness of the future, which the crisis of 2007-08 has shown and which we have to face. 'Now' we know but we must nevertheless decide, particularly if we work in finance or in politics. How can we take this circularity and the related (radical) uncertainty into account? Can we go on operating, and if so how? Maybe it would be advisable to avoid aiming at specific effects, but rather acknowledge the reactivity of the markets and try to use it while remaining ready to learn from their unpredictable behaviour. Are there examples of this kind of attitude?

Quantitative easing and the construction of the future

To give an answer I will discuss a specific financial instrument that has an essentially temporal nature (in the sense that it uses time and acts on the future and on expectations): the quantitative easing (QE) that has been applied to the US economy and more recently also in Europe. It seems to me that the policies of QE can be read from a temporal perspective and this helps us understand the reasons for their relative success (or failure).

QE is an unconventional monetary policy that has the interesting feature of being effective, but inexplicable. As Ben Bernanke, the Fed chairman, said: "The problem with QE is, it works in practice, but it doesn't work in theory." But then shouldn't theory change in order to take this into account?

Such a change requires first of all more attention to our theme, the temporalities of finance. The way QE actually operates is based on time, trying to react to the attitude prevalent in the markets after the crisis, which was the opposite of the one that characterized the previous expansive phase. Instead of intensively using the future in the present there was a general unwillingness to use the future and therefore also to shape it and to create future possibilities after the crisis. That is why deflation, a constant concern in recent years, is a problem. Instead of investing and borrowing (i.e., instead of working/infl nc-ing on the future), people save, counting on falling prices. Consumption then decreases and companies do not make profits, invest less and less and prices fall further down. We do not build the future and the economy stagnates.

QE tries to intervene in this vicious circle, inserting ("injecting") liquidity into the economy in order to boost investment. In our terms, it tries to stimulate the use of time by creating money, which itself is the economic equivalent of the availability of the future. In this way, it brings the future into markets, hoping that it will be used. QE is basically the creation of money, even if it is not printed but produced by electronic means and is indirectly inserted into the markets. As external operators, central banks that implement QE measures do not have a direct impact on markets. Central banks have historically been tasked with controlling inflation mainly by setting key interest rates. In QE, instead, the intervention is indirect and not rough, even if it is heavy (it has been called a 'monetary bazooka').

QE presupposes a certain awareness of performativity because central banks actually act as one investor among many within their own economy. Central banks use their privileged position to do what others cannot do, to create money. However, they do not impose an outcome on the market(s) from outside. Rather, they create stimuli and opportunities from within, leaving markets the freedom to react and to use it as they see fit. This is part of the theoretical inexplicability of QE. We know that the bazooka has effects, but no one knows what these effects will be, because the agent triggering them (the central bank) operates as an agent among others in the complex financial environment of which it is part, but which it cannot determine.

The central bank buys financial assets from banks (mainly bonds, even toxic ones), thereby causing a rise in demand and, consequently, an increase in price. However, if bond prices rise, the interest rate drops. Access to credit should become less expensive, so families and businesses should have more money available because of the additionally created money and also because they can borrow it more easily. This way consumption and investment should be boosted, boosting the use and shaping of the future in the process.

This whole construction is hypothetical because it relies on assumptions about market reactions and is full of contingencies. Banks for example could decide not to use the newly available liquidity to grant loans, but instead to deposit it at the central bank itself, improving their margins and avoiding risks – i.e. narrowing instead of expanding future possibilities. Investors could gain confidence and start to operate, but they could also interpret QE itself as an index of the severity of the situation, shrinking their outlays even more. This circular uncertainty always affects central bank policies that are meant to encourage risk-taking, with the ultimate goal of stimulating economic growth and improving employment rates. From the "Greenspan put" **[9]** on, various measures have been interpreted in the US and Japan as a sort of guarantee from the central bank for investors, similar to that provided by a put option. If these kind of measures, which are in a sense the forerunners of QE, are repeated, investors tend to count on the fact that the central bank would intervene in the case of an economic crisis. They then speculate on this intervention with the effect of creating a moral hazard, instead of revitalizing the real economy.

[9] The monetary policy exercised by Alan Greenspan at the FED from 1987 to 2000. The Fed injected liquidity into the market after the 1987 stock market crash and repeated the same policy several times after later crises.

Steering the economy from inside

Indirect measures are only stimuli, and it is up to the future to decide what to make of them. In any case the offered stimuli will have effects (which differ depending on the context and on circumstances). You cannot univocally say, however, who is governing and who is governed: do central banks govern the trends of the markets or do the trends of the markets govern the policies of central banks, which react to the signs of crises?

In all cases of non-conventional measures, empirical evidence of success is difficult to assess. In general, all observers agree that without the massive intervention of the monetary authorities the 2008 crisis would have been longer and more severe. Yet what was its impact on growth and inflation,

which depend on many factors that are intertwined and affect each other (Giugliano 2016)? While there are no doubts about the performative effects of public intervention on the construction of the future, it is impossible to determine them precisely. Public policies certainly have effects, but maybe they are different from those that the governors had in mind.

There is no guarantee of success, as with any action that takes the open future into consideration. You cannot know in advance if the intervention will be successful. You may know, however, that no one can know it and that this also applies to any alternative intervention. In these circumstances it makes little sense to ask the question of whether an intervention will be successful or not. It rather makes sense to ask if and how the parties that are intervening with the future possess the ability to learn, which would necessitate a constant remodulation of the relationship between the present future and the future present. This implies the ability to observe finance and take the forms of its temporality into consideration while doing so, i.e. (back to Keynes) the basic function of the monetary economy.

Indeed, the comments of the observers on the success (or lack of success) of the European Central Bank's (ECB) QE policy after a few months reflect the openness of the measure and show a corresponding evaluative openness. Nobody was univocally affirmative or condemning of QE. Commentators took the multidimensional character of the situation into consideration and, in general, tended to make judgements that refer to future developments. The future being open, the judgements were correspondingly open. Even those who tend to deny the success of the measure (such as Monacelli 2015a) made their judgement of the future contingent when referring to "what one can legitimately expect". Success was not directly measured according to the desired effects (the rise of inflation), but by referring to indirect effects, such as the performance of the euro exchange rate against the dollar and especially the return of the confidence of economic agents (Di Colli 2015).

The ECB itself apparently follows a policy of ongoing learning, modulating its further actions depending on the outcomes of the measures already taken. The announcement of the extension of the program till March 2017 was made at the end of 2015, showing a flexibility in setting deadlines on behalf of the ECB. But most importantly, the ECB raised the fee that banks pay to hold reserves at the ECB itself, reacting to the (dreaded) tendency of banks to 'park' the money obtained by QE and pushing them to use it instead for loans to businesses and consumers by doing so. The ECB learned from the behavior of banks that resulted from its own measures and acted accordingly.

Time and society

The effect of QE in Europe is still very different from that in the US - just as different as these cultures and their temporalities are. In the US, the measures apparently worked. The Federal Reserve's QE policy, along with government efforts towards an increase in the federal deficit from 2.8% in 2007 to 12% in 2009, seem to have led the US out of the crisis, with job growth and a rise in GDP. The ECB('s) and Bank of Japan's QE, on the contrary, failed to prevent

the fall in inflation and to set the construction of the future in motion. Since these measures sacrifice the privileged position of central banks as an external regulator and act on (the) markets from inside, however, this difference in effects can be better explained not so much by how QE is accomplished, but rather by how the corresponding society's relationship with time is structured.

In the US you go from the future to the present. The sense of the present is the result of the projection of the future, on which the interpretation and evaluation of the past depends. The sense of the present is 'colonized' by the construction of the future: decisions in the present depend on the future that one wants to build and the available possibilities will be defined accordingly. In Europe, on the contrary, you tend to go from the present to the future. The setting of the future (in this as in other fields) is the result of the past and the path that led to the present. The possibilities envisaged depend on this path.

Therefore, European countries still tend to adopt a restrictive fiscal policy in order to pursue a balanced budget (Baglioni 2015). Thereby they continue to bind the production of the future to a 'settling of accounts' with the past. The problem of the euro area is a lingering stagnation, linked to the fact that future projections (the construction of the future) are designed according to the speed of present change. Monacelli (2015b) draws upon the image of an escalator whose speed depends on the passengers making steps forwards or moving backwards. European operators apparently wait to move forward(s) until the speed of the escalator increases, while the speed of the escalator will not increase until the passengers start moving. The construction of the future is not the driving force of the present, but its consequence. As Keynes taught, in Europe as in the US the reference to time is the basis of the functioning of the economy.

In any case, one of the clearest lessons to be drawn from the observation of QE concerns the limits of monetary policies' impact. In 2016, for different reasons and in very different situations, the Federal Reserve, the ECB and the Bank of Japan are all facing a situation of mistrust and worried scepticism. The impression has spread that whatever they do, the central banks are becoming less and less effective. After long periods of low interest rates and bond-buying programs in place, there seem to be fewer measures available to central banks in order to stimulate the economy. Yet perhaps what one has to abandon is not the confidence in the effectiveness of policy measures, but the idea that an external regulation is possible.

Transformations in the financial markets, with the spread of the internet and a much less hierarchical situation, increasingly put the central banks in the position of an agent among others, possessing special tools, but not being able to determine market trends as powerful external

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